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Marine Corps Logistics Operational
Architecture in the 21st Century

SUBMITTED IN PARTIAL FULFILLMENT OF
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Michael R. Krohmer

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Mentor and Oral Defense Committee Member: Dr. Charles D. McKenna
Dean of Academics

Approved: *Charles D. McKenna, Ph.D.*
Date: 6 APRIL 2010

Oral Defense Committee Member:

Approved: *Mark Jacobsen*
Date: 6 APR 2010

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Preface

The impetus for this paper is based upon my personal interest in the topic after having spent four years at 3d Marine Logistics Group as the operations officer for a General Support Regiment that provided all intermediate level maintenance and supply support to all Marine Corps units on Okinawa and, later on, as the Logistics Moderation Officer for 3d Marine Logistics Group (MLG) responsible for the implementation of Logistics Modernization within 3d MLG. The topic centers around the Marine Corps' efforts to modernize its logistic capabilities, processes, and procedures, specifically focusing on the Logistics Operational Architecture. I would like to thank my family for their support of my studies during the past year, while I have attended the Marine Corps Command and Staff College and thank both the military and civilian faculty advisors at the Marine Corps Command and Staff College for their support and guidance on this paper.

Executive Summary

Title: MARINE CORPS LOGISTICS OPERATIONAL ARCHITECTURE IN THE 21ST CENTURY.

Author: Major Michael R. Krohmer, United States Marine Corps

Thesis: The Logistics Operational Architecture serves as the foundation for the Marine Corps wide logistics modernization effort and is essential to realizing the full potential for all the other logistics modernization initiatives. The logistics operational architecture enables the Marine Corps to implement a set of measurable, cross-functional processes that integrate and optimize the six combat service support functions to provide seamless logistics support across the entire Marine Air Ground Task Force (MAGTF).

Discussion: Recognizing the shortfalls and inefficiencies in Marine Corps logistics, the Marine Corps has taken a careful and studied approach in modernizing its logistics capabilities. The result of this approach is the enterprise-wide Logistics Modernization (LogMod) initiative. LogMod will ultimately produce more effective combat power through logistics, and these initiatives will impact our Marines and Sailors, our processes and procedures, and the way that technology is applied across the MAGTF. All of this will require patience, an open mind and creative thinking. This paradigm shift is not simple, and improving old techniques is inadequate.

At the core of this paradigm shift is the Log OA. The purpose of the Log OA is to support the implementation of enterprise wide processes for logistics. The Log OA is the blueprint for modernizing the logistics processes and allowing for the efficient application of the latest IT systems. The Log OA supports the integration and optimization of the six Combat Service Support (CSS) functions to provide seamless logistical support to the warfighter. In other words, it defines how the Logistics Command Element (LCE) will operate to meet the needs of the warfighter whether deployed or in garrison. The Log OA is based on the "end-to-end" process using the principles of logistics chain management as the foundation. Full implementation will move the LCE one step closer to realizing supply, maintenance and distribution process efficiencies.

Conclusion: While the Log OA serves as the foundation for the Marine Corps wide LogMod effort and is essential to all the other logistics modernization initiatives it remains largely misunderstood and unimplemented. In order to realize the full potential of the LogMod initiative, the Marine Corps as a whole must be vigilant against focusing on the information technology aspects and ensure that the Log OA is implemented across the MAGTF.

Introduction

A major problem confronting the Marine Corps logistics community today is how to increase efficiencies, provide higher levels of service, and improve Combat Service Support (CSS) responsiveness to the warfighter. The Marine Corps has increasingly come to realize that traditional organizational structures, CSS philosophies, and supply, maintenance and distribution methods are no longer conducive to the fast paced, dynamic, non-linear warfare that the Corps has experienced in Operations Enduring Freedom (OEF) and Iraqi Freedom (OIF).¹

Recognizing the shortfalls and inefficiencies in Marine Corps logistics, the Marine Corps has taken a careful and studied approach in modernizing its logistics capabilities. The result of this approach is the enterprise-wide Logistics Modernization initiative that is aimed at improving the lethality of the Marine Air Ground Task Force by streamlining and improving logistics processes and procedures. The most significant element of the Logistics Modernization initiatives is the definition of the Logistics Operational Architecture. The Logistics Operational Architecture serves as the foundation for the Marine Corps wide logistics modernization effort and is essential to realizing the full potential for all the other logistics modernization initiatives. The logistics operational architecture enables the Marine Corps to implement a set of measurable, cross-functional processes that integrate and optimize the six combat service support functions to provide seamless logistics support across the entire Marine Air Ground Task Force.

The Need for Transformation

What is needed are direct support logistics organizations that are supported unit focused in their external relations and process focused and team oriented in their internal operations.² Currently the Marine Corps is in the midst of the largest coordinated and cross-organizational transformation effort ever undertaken to modernize Marine Corps logistics. It is focused solely on enhancing the lethality and operational reach of the Marine Air Ground Task Force (MAGTF) and greatly improving logistics in support of the warfighter.³

"As the Commanding General of I MEF's 1st Force Service Support Group (FSSG), my biggest challenge was maintaining the agility required to adapt to rapid changes on the battlefield in a ground fight of unprecedented speed. 1st FSSG's greatest accomplishment was sustaining a reinforced MEF's swift attack across those 450 miles from Kuwait to Tikrit.... OIF was a logistics war, and the success of I MEF was a testimony to the support and sustainment capabilities of the Marine Corps. However significant our logistics successes, we did experience challenges in our prosecution of the war as a result of some key shortfalls."⁴

Brigadier General Edward G. Usher III

With today's fast paced, dynamic, non-linear battlefields, demands to improve logistics information and provide better support to the warfighter are increasing.⁵ In the mid 1990s Marine Corps leaders, recognizing this need, implemented what was called the Precision Logistics Program.⁶ Precision Logistics focused on the process improvement philosophies and methodologies employed by many successful commercial industries to achieve significant performance improvement. Early analysis confirmed that outdated processes, dependent on antiquated systems, were the cause of many logistics-related problems. Initial Precision Logistics efforts focused on defining and measuring

logistics processes, the first two steps in a "define-measure-improve" continuous improvement methodology.⁷

The Marine Corps Study of Better Business Practices

The "define-measure-improve" continuous improvement methodology of the Precision Logistics effort produced a basic case for change which focused on improving processes and buying modern technology.⁸ Moving on to the next phase of continuous improvement, the Marine Corps initiated the Integrated Logistics Capability (ILC) initiative to plan the next generation of core logistics processes and the supporting information technology infrastructure. The goal of the ILC was to examine the "best-in-breed" commercial logistics business practices, study their applicability to Marine Corps logistics, and develop a plan to model those suitable business practices.⁹ In its examination, the ILC found that many of the commercial industries logistics better business practices could be utilized by Marine Corps logistics.¹⁰

What this meant for Marine logistics was a commercial based path of philosophies and techniques could be utilized to significantly improve MAGTF logistics. In today's environment, this meant a leaner, more focused logistics effort; one that provides a more sustainable, and combat effective force with the smallest possible logistical footprint ashore. This is to be accomplished by; focusing logistics processes on the MAGTF to create an agile, flexible, and responsive logistics chain; creating an integrated set of Logistics Chain processes with a robust order management and distribution capability as the hub; and enable the Logistics Chain with a portfolio of interoperable systems and technologies.¹¹

With the commitment to improve MAGTF logistics, the information age would soon dawn on the MAGTF. Before acquiring new technologies, requirements had to be clearly defined and antiquated processes thoroughly reviewed through Business Process Reengineering (BPR) in order to develop the foundation for the improved logistics practices and information management. One of the most significant results of this approach was the definition of the Logistics Operational Architecture (Log OA). The Log OA highlighted information "touchpoints" that would dramatically streamline the Marine Corps' logistics model. The powerful combination of the Log OA and new Information Technology (IT) has the potential to deliver the logistics support capabilities required in today's dynamic battlefield.¹²

The Logistics Modernization Solution

As a result of the precision logistics and ILC efforts, a Solution Initiating Directive (SID) was developed and served as the transitioning point in what is now known as the Logistics Modernization (LogMod) effort. The SID is a high-level document that provided the vision and guidance for LogMod. It essentially moved the Marine Corps into full implementation of the better business concepts to actionable process reengineering and IT procurement.¹³

The LogMod approach to logistics improvement focused on people, processes, and technology to produce a more effective and efficient Logistics Chain. This involves modernizing, integrating and streamlining supply, maintenance and distribution processes, modernizing and integrating IT solutions, adding new occupational specialties, and creating more efficiently organized logistics units.¹⁴

According to the Commandant, LogMod's importance is "either above or at least on the same level with the weapons systems we have coming down the road." It is also the Deputy Commandant, Installations and Logistics' (DC I&L's) main focus of effort—to increase the lethality and operational reach of the MAGTF by educating and empowering CSS personnel, implementing new and comprehensive CSS processes, and replacing outdated IT and communications capabilities.¹⁵

What is the Logistics Operational Architecture

In all, the LogMod effort includes six coordinated initiatives; the Log OA, logistics command and control, combat services support reorganization/renaming, MAGTF distribution, realignment of maintenance, and the realignment of supply.¹⁶ While collectively the six initiatives constitute LogMod, the Log OA is at the core and serves as the foundation for the enterprise-wide LogMod effort and is essential to realizing the full potential for all the other LogMod initiatives. The Log OA enables the Marine Corps to implement a set of measurable, cross-functional processes that integrate and optimize the six combat service support functions to provide seamless logistical support across the entire MAGTF.¹⁷

The Log OA is based on Business Process Reengineering (BPR) studies and it captures the new streamlined processes and procedures that govern Marine Corps supply, maintenance, and distribution activities. It defines the procedures for meeting the logistical needs of the MAGTF in garrison and on the battlefield and has the potential to significantly improve the lethality of the Marine Corps through logistics. The Log OA serves as the blueprint for modernizing the logistics processes and takes advantage of the latest IT systems to

improve responsiveness and to better integrate the six CSS functions. The Log OA is based on the "end-to-end" process that includes all activities required to meet a supported unit's logistics requirements from request to fulfillment. It is flexible in that it supports both Direct Support (DS) and General Support (GS) relationships, and is scalable in that it applies to MAGTFs of all sizes and composition regardless of mission, situation or location.¹⁸

"The Logistics Operational Architecture establishes procedures and associated systems functions for planning, managing and fulfilling MAGTF logistics requirements. These capabilities position the Marine Corps to provide agile, lean, effective, and sustainable forces to the Combatant Commanders. Furthermore, they enable the Marine Corps to reduce its deployment footprint and increase the lethality of our expeditionary MAGTFs."¹⁹

Brigadier General Edward G. Usher III

The tendency of most organizations seeking operational improvement is to automate their processes as much as possible through readily available technology. In the IT world, this approach to business improvement is called "paving cow paths" because a typically poor process is automated with a total disregard as to whether or not it is the process itself that is the root of the inefficiencies and ineffectiveness.²⁰ More often than not, any reasonable expectation to significantly improve any business operation requires a careful study of the processes in order to figure out an entirely new way of doing business in concert with newly applied IT.

The Log OA is a result of such a careful study. The underlining purpose of the Log OA is to provide flexible, responsive, reliable, and integrated logistics support to the MAGTF while the logistics chain focuses on fulfillment of the demands for products and services generated by the warfighter. There are a number of differences between

Log OA and the "old way" of doing business. First, the Log OA is based on a logistics chain process for order fulfillment versus a chain of command for command and control. In other words the Log OA is designed so that the supported unit goes directly to the source for all things logistical vice the current request flow that follows the chain of command. This streamlines the request flow and improves responsiveness. Second, the Log OA shifts the burden of logistics from the warfighter to the logisticians. The LCE should be responsible for the "lion's share" of all things logistical but the old way of doing business requires the warfighters to manage backorders, shipping status and other logistics functions. The Log OA places the burden of logistics on the logistician reducing CSS complexity for the warfighter and allowing them to focus on their warfighting functions. Third, it connects the logistician to the warfighter, promoting improved Logistics Chain Planning (LCP) which reduces the logistics footprint and improves responsiveness and reliability. Fourth, it facilitates integrated CSS providing a single set of CSS procedures for all elements of the MAGTF. Fifth, it establishes and defines the framework to which the latest IT systems to include Global Combat Support System - Marine Corps (GCSS-MC) will be applied; potential technological efficiencies cannot be realized by placing IT systems on broken processes.²¹

Problems with Current Marine Corps Logistical Processes

Current Marine Corps logistical processes are separated (or stovepiped) and typically follow a command and control structure indicative of military customs driven by the thought that a supported unit's request must flow through the chain of command so that every level has an opportunity to influence the request and fulfillment.

This breeds inefficiencies through layered inventory levels, broken processes, and ineffective dispersion of manpower, equipment and the lopsided sharing of the "logistics burden". The warfighter's perceptions of and the realities of current logistical inefficiencies adds to the problem through reorders, cancellations, scrounging, and the building of the "Iron Mountains" all of which reinforce the thought that the warfighter must take an even greater role in logistics. In an attempt to satisfy the warfighter's needs the LCE implements even more control which exacerbates inefficiencies in inventory, distribution, and hinders responsiveness.²²

During its study, the ILC examined the process required by Military Police Battalion, 2d Marine Logistics Group (MLG) to order supplies by class. Each request went to a different organization within the MLG, and many used different systems with unique business rules and processes. This study serves as a striking example of the convoluted state of the Marine Corps current Logistics Chain Management and, just as important, is the fact that the responsibility for managing the various processes is on the supported unit.²³ The following figure illustrates the convoluted state of today's logistics chain management and how it places a lopsided logistical burden on supported units to manage logistics.

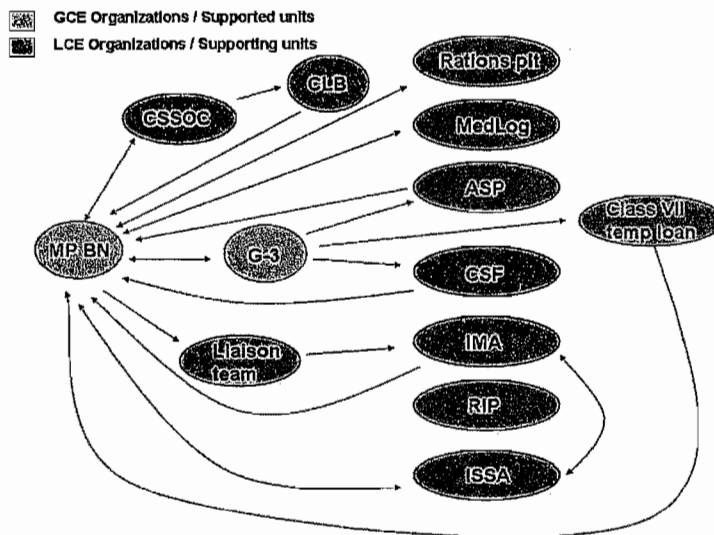


Figure 1, Military Police Battalion's logistics request routes.²⁴

Marine Corps Logistics Under the Log OA

The current architecture is confusing, complex and requires the using unit, the warfighter, to touch numerous logistical nodes depending on required services. For example, if problems arise with supply parts outside of a using unit's expertise, they contact Supply Battalion. If there are maintenance issues, they contact Maintenance Battalion, etc. The requirement for the warfighter, instead of a single logistics organization, is to pursue the answers to their logistical problem through multiple avenues creates the lopsided sharing of the logistical burden.

With the Log OA, the supported units are responsible for generating demands, performing operator level maintenance, maintaining custody and control of materiel and equipment and for their operational planning and mission analysis. Demand generation or request management represents the supported unit's interface with the logistics enterprise, "one belly button", for all logistical support.²⁵

Supplier 1 (the supporting unit) is responsible for the entire supply chain process. This includes all communications with all suppliers, vendors and service providers as necessary to fulfill demands. The interaction between the supporting unit and other providers is non-linear, which provides the ability to task laterally based on the situation and location of the desired product or service.²⁶

Supplier N is any provider that can respond to the requirements of the supported unit as requested by the supporting unit. Supplier N may be an organization, unit, commercial vendor, asset, or an individual that is capable of meeting the supported unit's logistical needs. Most of the time supplier N will be a Marine Logistics Group GS unit, but supplier N may include organizations that are part of the Marine Corps logistics enterprise such as Marine Corps Logistics Command (LOGCOM) or Marine Corps Bases. Supplier N may also be an agency outside of the Marine Corps but internal to the Department of Defense (DoD), such as the Defense Logistics Agency (DLA) or U.S. Transportation Command (TRANSCOM); or it may be external to DoD, such as commercial vendors and host nation support.²⁷ The following figure illustrates how the convoluted state of today's logistics chain management is simplified under the Log OA and how the Log AO places the logistical burden on the supporting unit, the professional logisticians, to manage logistics.

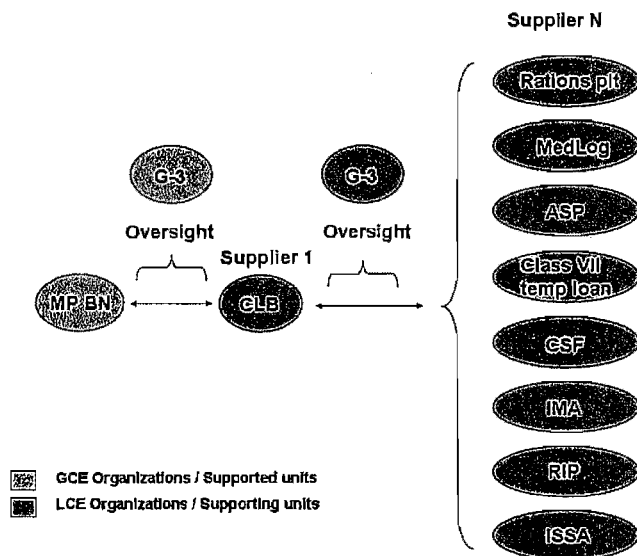


Figure 2, End-to-End process flow chart.²⁸

The Log OA removes the burden of logistics from the Warfighter (supported unit) and consolidates logistics, products and services, with the logistics provider (supporting unit). It defines a standard set of processes across all six functional areas of CSS for providing products and services to the customer. This architecture permits both the Warfighter and the logistics provider to focus on their core competencies. This business model provides a standard yet flexible logistics process that supports expeditionary operations in any situation worldwide. In general, the Log OA provides a standard business model from which a more exhaustive OA for the Marine Corps "To-Be" logistics enterprise can be developed. The end result will be a standard yet flexible supply chain supported by integrated, interoperable information systems that serve as the backbone of the Marine Corps logistics enterprise.²⁹

The Log OA will provide the MAGTF with a significant advantage by developing habitual supported/supporting relationships and procedures

that endure in garrison and tactical environments. Expected outcomes include increased accuracy, reliability, and responsiveness of logistics information, smaller logistics footprints, and reduced logistics chain expenses that will improve materiel readiness and logistics support to the MAGTF.³⁰ Demands for logistics through the Log OA are executed through an "end-to-end" concept, a horizontal process for fulfillment and integration. This is accomplished through "customer facing" and establishing those habitual relationships between supported and supporting units. The following figure provides a high-level view of how the Log OA structure and process flow could be applied across a MEF level organization.

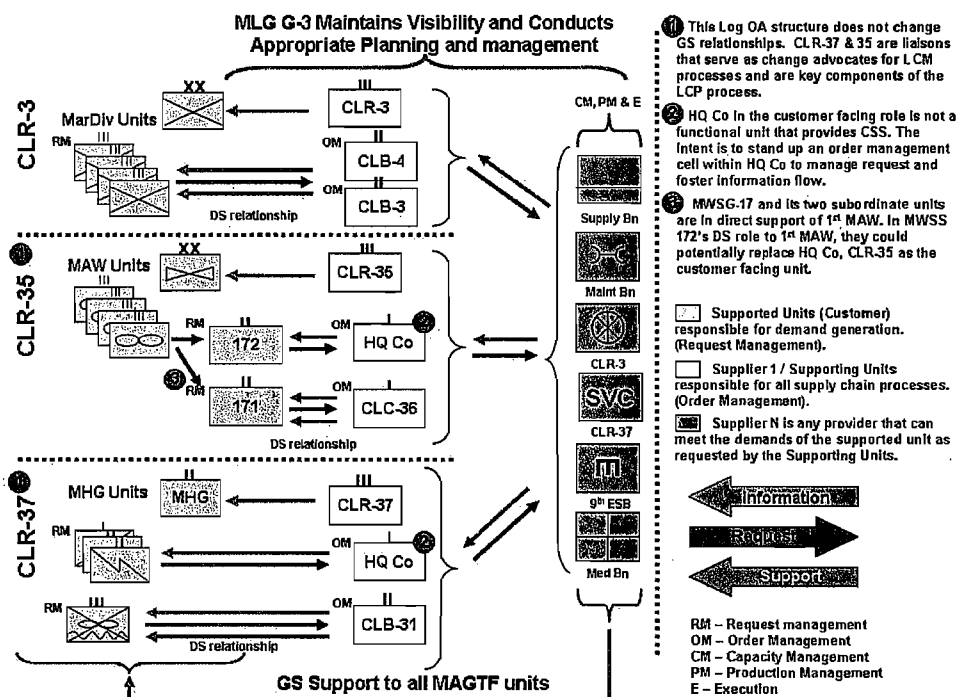


Figure 3, MAGTF Log OA structure and process flow.³¹

The Six Major Functions in the Log OA

There are six major functions identified in the Log OA that support the "end-to-end" concept and a horizontal process for

fulfilling logistical requirements. The functions are; Logistics Chain Planning (LCP), the planning and forecasting activities to ensure that the means in which the Logistics Command Element (LCE) provides logistical support is streamlined and integrated. Request Management (RM), the supported unit's process of generating, validating and submitting its logistics requirements to the LCE for support. Order Management (OM), the functions within the LCE of routing, coordinating, tasking, and tracking the supported unit's requirements from request to fulfillment. Capacity Management (CM), the LCEs process of planning and optimizing of logistics capability and capacity within its organization. Production Management (PM), the LCEs process of planning and managing of logistics support execution within a particular domain. Execution/Fulfillment (E/F), the LCEs final step in meeting the logistical requirements of a supported unit.³² The following figure illustrates how the six major functions support the end-to-end process.

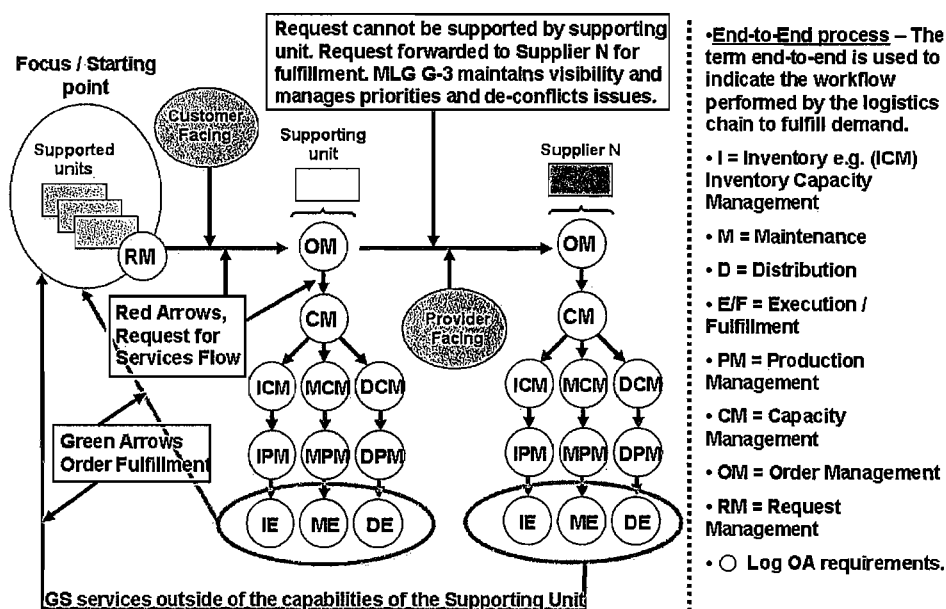


Figure 4, Integrated, cross-functional, end-to-end process model.³³

Collectively, the six major functions of the Log OA provide a means for the LCE to better anticipate supported unit requirements, better manage request for services from inception to completion as well as ensuring that supply, maintenance and distribution efforts are coordinated and integrated.³⁴

"We are continuing to shape our modernization initiatives, but we are maintaining a laser focus at the tactical level while using the rich body of lessons learned and relearned—primarily from OIF I. We continue to tap into those who do logistics best—whether they be government, the Armed Services, or the private sector. Simply put, logistics modernization is the most comprehensive approach ever taken to improve tactical and operational logistics."³⁵

LtGen Richard Kelly, DCI&L.

Commercial Industry's Better Business Practices and Their Application to Marine Corps Logistics

Even though the ILC found that many of the commercial industry's better business practices could be utilized by Marine Corps logistics, some may say that a difference that would significantly reduce the applicability is that Wal-Mart doesn't get shot at and Penske Truck doesn't have to conduct maintenance in the middle of a combat zone. While this may be true, Wal-Mart maintains a massive warehousing operation and a very robust distribution network to support its stores across the entire United States and beyond. And just as the Marine Corps maintains a large fleet of equipment so does Penske Truck with their leased vehicles supporting the commercial industry and their rental fleet supporting individuals. It is obvious that the Marine Corps has unique requirements and because of those requirements it cannot emulate every aspect of Wal-Mart and Penske Truck but without a doubt there are elements of their respective best business practices that make these companies among some of the most competitive in the industry.

In the late 1970s and well into the 1980s, IT was the rage in the commercial industry and promoted as a key to competitiveness. IT departments grew significantly, the interworking of companies was becoming more sophisticated, and most anything that could be automated was. All of this effort to increase competitiveness was doing nothing more than turning cow paths of most business processes into superhighways that simply did not provide the return on investment that was expected. The focus quickly turned from IT and automation to the process itself and the redundant steps involved.³⁶

A study by researchers at MIT found that an increase in IT does not necessarily equate to an increase in productivity or competitive distinction. Stephen Roach, the economist at Morgan Stanley, noted that significant IT investments in the service sector provided marginal gains averaging only $\frac{1}{2}$ to 1 percent per year throughout the 1980s and into the 1990s.³⁷ Another problem facing many companies was their initial focus on task improvement vice process improvement. The difference is that a task is usually a business activity that is performed by an individual where a process is a related group of tasks that collectively provides some type of value to a customer.³⁸ This problem of tunnel vision on IT procurement and task analysis is not foreign to the Marines Corps. The Marine Corps has purchased countless IT solutions for specific tasks and these stovepiped solutions have exacerbated the problems of inefficiencies and ineffectiveness.

The Marine Corps' use of the BPR to pursue process improvement assisted in side stepping many of the pitfalls to which other large companies have fallen victim. This is because BPR views IT as an

enabler, not as a driver to improvement. Even though it is easy to see, or at least see the illusion of, how large investments in IT are needed to affect significant change, the change must be driven by a focus on changing customer-facing core business processes and not on the reliance of IT itself.³⁹

The biggest strides toward a more competitive organization involve focusing on the core business processes that directly touch customers and the suppliers, rather than those processes that are completely internal to the company. The core processes were defined as the required, or critical, elements of a company that would allow it to excel in order to be more competitive.⁴⁰ What researchers found is that it is not necessary for a company to rebuild itself from ground zero, but what the application of BPR allowed companies to do was to step back and examine the traditional ways of conducting business and reworking it. Anyone that has been a part of any large organization understands that any attempt to change even a basic process can be a daunting task and for many companies it is one that is nearly impossible to accomplish. In many cases the "cultural pushback" against the kinds of radical change necessary causes a company to fall flat in implementation and unable to make any significant process improvements.⁴¹ The Marine Corps is no exception to this trend, especially when considering that many of the antiquated supply and maintenance processes have been used by Marines since the early 1970s.

For over thirty years large American companies have been in constant pursuit of improving performance, especially as international competition became more prevalent and consumers began to demand higher quality products. Many companies began analyzing operations, procuring

the latest IT systems, adopting the latest in management philosophies, and sending their people to numerous training programs with little return on their investment. Many well known companies maintained incredibly inefficient business practices.⁴²

Some examples of well known but incredibly inefficient companies were: Aetna Life & Casualty, who spent only twenty-six minutes processing applications for homeowner's insurance but took an average of twenty-eight days to get the paperwork back to the client. Chrysler spent an average of \$300 on a \$10 pad of stationery because of routing and approval processes. Texas Instruments' Semiconductor Group could only produce integrated circuits in six months when it took their competition thirty days. GTE was only able to solve 2 percent of their customer's problems during a first call. 44 percent of Pepsi's invoices contained errors that led to endless disputes with their customers.⁴³

A case study of Chevron Chemical Company's first BPR project began in early 1992. An examination of peer competition clearly showed that the company's product delivery process was below competitive standards. In addition, the company's 25 year old command and control and information management systems were convoluted and slow. For example, one result of the BPR process was the discovery that 20 percent of the invoices were still hand written and that the information management systems for their four divisions were all different. To improve operations, Chevron Chemical Company concurrently invested in standardized business processes for all four divisions and IT.⁴⁴

Another case study involves Carolina Power and Light and their pursuit to provide better information for better customer service. Power companies, such as Carolina Power and Light, had to become more competitive shortly after legislation dissolved the monopolies that they had in the various regions across the U.S. In an attempt to improve electric power reliability and customer satisfaction, Carolina Power and Light began with a BPR study of all their processes. One process that was vastly improved was their billing process. Before the BPR review their billing process took 2 hours and 40 minutes of actual work but four days to complete the entire process through four separate departments. After the reengineering, the new billing process took 30 minutes of work and one day to complete the entire process within one department.⁴⁵

The list of companies that successfully streamlined their business processes through a BPR approach is extensive. The inefficiencies, inaccuracies, and inflexibilities that were common to most companies, including the Marine Corps, were not real problems until it began to matter. It began to matter as domestic and international competition increased and customers were faced with the decision between loyalty and customer service. Just as commercial industry had to change or die, the Marine Corps, more specifically the Marine Corps logistics community, must adapt and strive not to be the limiting factor in the MAGTF's capabilities.

Issues with Implementation

While it is easy and exciting to talk about the potentially high degree of success a company, and in this case the Marine Corps, can

attain through a carefully planned and executed BPR effort, it's also necessary to point out that this is a risky undertaking.⁴⁶

Numerous BPR ventures have failed for various reasons. The most common factor has been the inability or lack of leadership in the change process. It is very difficult to change the business processes of large organizations, so difficult that most leaders would grossly underestimate the amount of energy and activities required to bring about change successfully.⁴⁷ While failures can occur for a myriad of reasons they often do so because of some very common errors. According to John Kotter, a change management expert, some of the most common errors are: Allowing complacency, failing to create a powerful guiding coalition, underestimating the power or lack of a vision, not communicating that vision early and often, permitting obstacles to block efforts, failing to create short-term wins, declaring victory too early, and not allowing or neglecting to anchor the roots of change deep enough into the organization's culture.⁴⁸ The consequences of these common errors vary but it is safe to say that in these circumstances the BPR efforts will more than likely not mature and reach their full potential.

Chain of Command and logistics chain process flow

As mentioned earlier, current Marine Corps logistical processes typically follow a chain of command structure that breeds inefficiencies vice a logistics chain that streamlines the entire process. At first this may appear to be exclusively a military necessity but the commercial industry struggles with the same issue. This same hierarchical organization found in both military and commercial industry circles are established for one purpose, that of

command and control. The chain of command and its command and control structure are well suited for labor control and economies of scale, but they also serve as barriers. Too many levels within the organization institutionalize bureaucracy. These characteristics of command and control are not consistent with today's CSS goals and place a premium on control instead of on responsiveness.⁴⁹ The following figure illustrates the deference in the current state of command and control structure and a logistics chain structured flow.

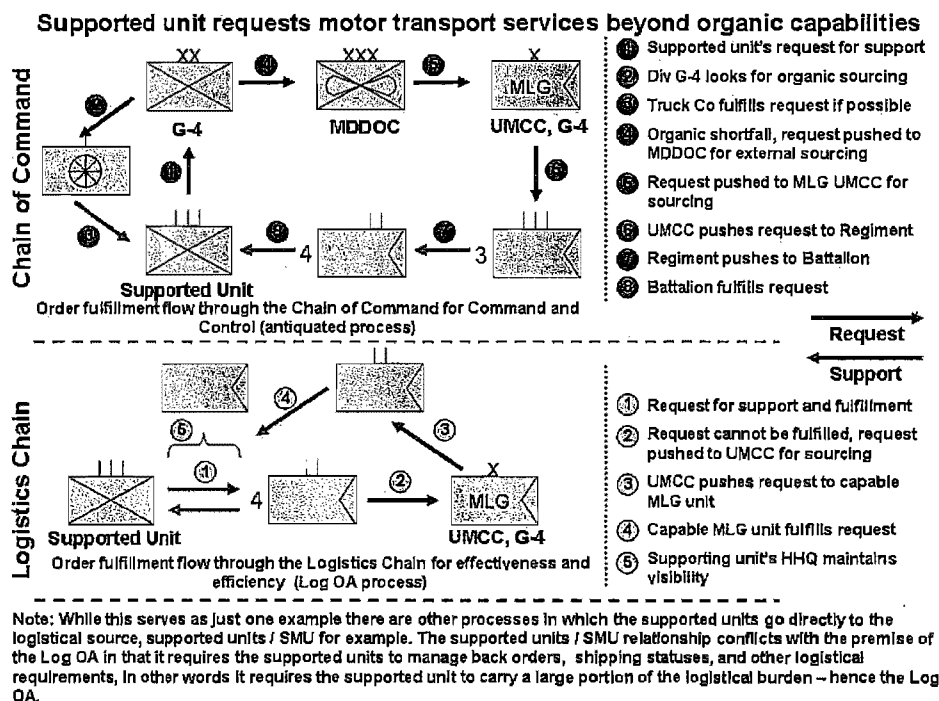


Figure 5, Chain of Command and logistics chain process flow comparison.⁵⁰

It may seem inconceivable for any large organization, to include the Marine Corps, to operate without the traditional chain of command but this is exactly what a process-centered organization does.⁵¹ This is not to say that the chain of command is completely absent from the process. Procedures must be established so that the chain of command maintains visibility of activities through various venues such as

briefs, electronic command displays, or whatever other means the command may deem necessary to maintain its situational awareness. Most important is that the chain of command no longer serves as a barrier to efficiency. This concept may not be as foreign to the Marine Corps as it may first appear. For example, when it comes to planning for exercises, many battalion and regimental organizations are given Direct Liaison Authority (DIRLAUTH) to facilitate a smoother, more efficient planning process. Periodically throughout the planning process the higher headquarters, the Marine Logistics Group and the Marine Division for example, are provided with an In Progress Review (IPR) where some guidance may be provided but the IPR serves more as a means to provide situational awareness. This facilitates the ability of the subject matter experts to rapidly develop the necessary plans to accomplish the mission.

The Marine Corps does not produce managers but the concept of a Logistics chain versus the chain of command is a management issue. There is a critical distinction between management and leadership. Management can be defined as a set of processes that keeps a complicated system of people and technology running smoothly. On the other hand, leadership defines the future, aligns people, and motivates them to overcome obstacles.⁵² The reason the concept of a logistics chain versus a chain of command is so important is that it represents the largest hurdle to the Log OA, one that is not limited to the logistics community but to the Marine Corps as a whole.

Challenges Associated with LogMod

The Marine Corps understands the challenges associated with LogMod and has taken the proper steps to lead change but not all of the

efforts have been applied sufficiently. As the LogMod officer for 3d MLG, I all too often felt the frustrations of trying to lead change in an organization where the cultural roots and established processes run deep. During my two years as the LogMod officer I was often reminded that it takes so much more than "the leadership" saying that we must make improvements to the system to affect change. The number of active resisters, typically senior Marines who will actively and openly work against any efforts of change, and passive resisters, typically junior Marines that are content to do as they are told by the active resisters, can easily stop the LogMod effort especially as time goes by and the enthusiasm for the initiatives begins to waver. Couple this general resistance to change with a lack of a true understanding of the importance of Log OA as the foundation to current and future LogMod efforts and I grow concerned about Marine logistics defining the limits of MAGTF operations.

Case in point, during my research for this paper I discovered no articles involving the Log OA but there was plenty of information on the Marine Corps "high speed" IT procurements such as GCSS-MC. Most of the information that I found on the Log OA was in two obscure publications dating back to 2003 and 2005. The carefully studied approach by the Precision Logistics and the ILC teams identified the need for a process based solution but has the Marine Corps begun to fall into the IT solutions trap?

Conclusion

To reiterate, LogMod is a transformational, complex effort focused on rebuilding Marine Corps logistics based upon sound business practices and the experiences that have come out of OEF and OIF.

LogMod will ultimately produce more effective combat power through logistics, and these initiatives will impact our Marines and Sailors, our processes and procedures, and the way that technology is applied across the MAGTF. All of this will require patience, an open mind and creative thinking. This paradigm shift is not simple, and improving old techniques is inadequate. At the core of this paradigm shift is the Log OA. The purpose of the Log OA is to support the implementation of enterprise wide processes for logistics. The Log OA is the blueprint for modernizing the logistics processes and allowing for the efficient application of the latest IT systems. The Log OA supports the integration and optimization of the six CSS functions to provide seamless logistical support to the warfighter. In other words, it defines how the LCE will operate to meet the needs of the warfighter whether deployed or in garrison. The Log OA is based on the "end-to-end" process using the principles of logistics chain management as the foundation. Full implementation will move the LCE one step closer to realizing supply, maintenance and distribution process efficiencies.

The end state for Log OA is logistics chain management functions that are standardized, implemented, and institutionalized. The expected outcomes from the combination of Log OA and the latest in IT systems includes increased accuracy, reliability, and responsiveness of logistics products, services and information to the supported units as well as a smaller logistical footprint and reduced logistics chain expense for the LCEs. While it is intuitive that improving our logistics processes will likely reduce cost, success will be measured by how well we enhance the MAGTF - not by cost savings. Nor will we be content with simply improving how logistics is done today. Our current

processes and systems lack the necessary tools to support future operational concepts.⁵³

While the Marine Corps has recognized the importance of the Log OA and how essential it is to the Marine Corps wide LogMod effort it still remains largely misunderstood and unimplemented. Based on my experience as the LogMod officer for 3d Marine Logistics Group I have run into a seemingly impenetrable wall of doubt, misgivings, and complete ignorance about the Log OA. When it came to the Log OA and its implementation within III Marine Expeditionary Force, most Marines, from Lance Corporals to Majors, had no concept of the Log OA. The only Marines that appeared to possess an inkling of the Log OA were typically high level Officers and Staff Non-Commissioned Officers who sat in on group level meetings, some of which would argue that the Log OA has been successfully implemented. The Log OA is in a fragile state and in order to realize the full potential of the LogMod initiative, the Marine Corps as a whole must be vigilant against focusing on the information technology aspects alone and ensure that the Log OA is implemented across the MAGTF.

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